Wolters Kluwer
Health & Technology
Investor Teach-In

December 9, 2021
Forward-looking statements

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Growth rates are cited in constant currencies unless otherwise noted.
Today’s speakers

Nancy McKinstry
Chairman & CEO
Wolters Kluwer

Stacey Caywood
CEO
Wolters Kluwer Health

Peter Bonis, MD
SVP & Chief Medical Officer
Wolters Kluwer Health

Vikram Savkar
SVP & GM, Medicine Markets
Wolters Kluwer Health

Alex Tyrrell, PhD
SVP
Wolters Kluwer Digital eXperience Group
(*/dxg)
Agenda

- Introduction - Nancy McKinstry
- Health - Stacey Caywood
- UpToDate - Peter Bonis
- Ovid - Vikram Savkar
- */dxg - Alex Tyrrell
- Summary - Stacey Caywood
- Q&A
Health transformation

*Steady product investment and selected M&A has remade the Health division*

### Health Division

<table>
<thead>
<tr>
<th></th>
<th>2005</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenues, € million</td>
<td>656</td>
<td>1,193</td>
</tr>
<tr>
<td>Adj. operating margin %</td>
<td>15.9%</td>
<td>28.7%</td>
</tr>
<tr>
<td>% Print</td>
<td>~65%</td>
<td>12%</td>
</tr>
<tr>
<td>% Recurring</td>
<td>~55%</td>
<td>91%</td>
</tr>
<tr>
<td>Product development, € million</td>
<td>35-45</td>
<td>95-120</td>
</tr>
<tr>
<td>FTEs</td>
<td>2,168</td>
<td>2,824</td>
</tr>
</tbody>
</table>

Note: Product development includes Capex and Opex
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Health in context

A growing part of Wolters Kluwer

Wolters Kluwer Revenues
€ million

2015: 4,208
2020: 4,603

Wolters Kluwer Adjusted Operating Profit*
€ million

2015: 952
2020: 1,184

Note: *excludes Corporate costs
**Best care everywhere**

*Our mission is to advance the **best care everywhere** by supporting clinicians throughout their life cycle to deliver better outcomes across the continuum of care*

<table>
<thead>
<tr>
<th>Health Education</th>
<th>Medical Research</th>
<th>Clinical Decision Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lippincott</td>
<td>Ovid</td>
<td>Clinical Solutions</td>
</tr>
</tbody>
</table>

- Circa 60% of Health revenues from expert solutions with renewal rates over 90%
- Health division employee engagement of 88% (2020)
- Annual product development spend 8-10% of Health revenues
- Net promoter scores (NPS) over 30 for most major products

Better health outcomes
Health market trends

Covid has accelerated market trends creating new challenges and opportunities

- Accelerated focus on virtual care/telemedicine
- Increased demand for technology and efficiency to alleviate the pressure on hospitals and their staff
- Consumerization of healthcare as competition for patients/members increases
Global leader

A global leader developing and supporting millions of students and practitioners of clinical care

**Learning, Research & Practice**
- Global #2 in medical research and education
- Ovid: over 250 million searches per year
- Serving 2 million practicing health professionals
- Educating 1 million medical and nursing students worldwide

**Key products**
- Medical research platform: Ovid®
- Medical and nursing journals, books and learning tools: Lippincott®
- Continuing medical education: Audio Digest®

**Wolters Kluwer Health Revenues by Segment**

<table>
<thead>
<tr>
<th>2015</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>0%</td>
<td>100%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Learning, Research &amp; Practice</th>
<th>Clinical Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>47%</td>
<td>53%</td>
</tr>
<tr>
<td>53%</td>
<td>47%</td>
</tr>
</tbody>
</table>

**Clinical Solutions**
- Global #1 in clinical solutions
- Supporting over 38,800 healthcare institutions and practices across 191 countries
- Supporting over 50,000 pharmacies
- UpToDate: over 650 million clinical topic views per year

**Key products**
- Clinical decision support: UpToDate®, UpToDate Advanced®,
- Clinical drug information: Medi-Span®, Lexicomp®
- Patient engagement: Emmi®
- Clinical surveillance: SoleSource®, Sentri7, POC Advisor
- Clinical terminologies: Health Language®

*Note: 1. Pharmacy OneSource was rebranded SoleSource*
Health evolution

Over the past five years, Health revenues have become more digital and more recurring

Evolution of Health Revenues 2015 and 2020

Media Format

<table>
<thead>
<tr>
<th>Year</th>
<th>Digital</th>
<th>Services</th>
<th>Print</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>78%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2020</td>
<td>88%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Recurring & non-recurring

<table>
<thead>
<tr>
<th>Year</th>
<th>Other non-recurring</th>
<th>Print books</th>
<th>Recurring</th>
</tr>
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<tbody>
<tr>
<td>2015</td>
<td>82%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2020</td>
<td>91%</td>
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</table>
Global and comprehensive

We support customers in over 190 countries

- Tennessee-based multi-state system
  - UpToDate
  - Lexicomp
  - Ovid
  - CSC Compliance

- Ohio-based health system
  - UpToDate
  - Lexicomp
  - Emmi
  - Ovid
  - Nursing Solutions
  - Health Language

- Hosp. Sírio-Libanês
  - UpToDate
  - Lexicomp
  - Medi-Span
  - Ovid

- Oxford Univ. & Cambridge Univ.
  - UpToDate
  - Ovid

- Friedrich-Althoff
  - Ovid

- Asklepios
  - UpToDate
  - UpToDate Advanced
  - Lexicomp
  - Ovid

- Ministry of Health
  - UpToDate

- Beijing Hospital
  - Ovid
  - UpToDate

- C.A.U.L.
  - Ovid

- University of Cape Town
  - UpToDate
  - Lexicomp
  - Medi-Span

- Min. of Health
  - Lexicomp
  - Medi-Span

- Mediclinic
  - UpToDate
  - Lexicomp
  - Nursing Solutions

- ERMEDE Consortium
  - Ovid
Strategic priorities

Our goal is to deliver consistent and resilient organic revenue growth and margin appreciation over the longer term

**Wolters Kluwer Health Organic Growth**

<table>
<thead>
<tr>
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<th></th>
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<tbody>
<tr>
<td>9%</td>
<td>9%</td>
<td>8%</td>
<td>6%</td>
<td>5%</td>
<td>8%</td>
<td>8%</td>
</tr>
</tbody>
</table>

**Wolters Kluwer Health Adjusted Operating Margin**

<table>
<thead>
<tr>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>24.1%</td>
<td>24.5%</td>
<td>25.5%</td>
<td>27.5%</td>
<td>27.0%</td>
<td>28.7%</td>
<td>31.2%</td>
</tr>
</tbody>
</table>

**Health revenue drivers**
- Promote cross- and up-selling
- Accelerate product innovation
- Deepen our global reach

**HY 2021**
- Organic growth +8%
- Clinical Solutions +6%, led by UpToDate and drug information
- Learning, Research & Practice +11%
  - Print books rebound (against weak comparable in 2020)
  - ASCO journal contract win
- Margin increase reflecting operational gearing and temporary cost savings
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UpToDate

World’s most widely-used and most comprehensive resource for evidence-based medicine

More than 38,800 institutions worldwide

2 million clinicians in 191 countries

650 million topics viewed per year

7,000 authors and peer reviewers
Answering the important clinical questions

Physicians have approximately 15-20 clinical questions a day, but 60% of these questions go unanswered. Answering unanswered clinical questions at the point of care could change 5 - 8 patient management decisions each day.

UpToDate

*UpToDate has been studied extensively and is associated with improved outcomes*

Studies associate use of UpToDate with:

- Improved decision-making
- Enhanced patient safety
- Improved performance on quality measures
- Fewer diagnostic errors
  Diagnostic error rate 2% in group using UpToDate versus 24% in group not using UpToDate
- Reduced mortality
- Improved hospital efficiency due to shortened length of stay
- Substantial gains in medical education
  20 minutes daily usage equivalent to 1 year of medical residency

UpToDate

User feedback demonstrates UpToDate has impact in low-and middle-income countries

Somalia:
“It is my light in the dark”

Myanmar:
“It has saved many lives day in and day out”

Pakistan:
“UpToDate is excellent … Cure rate of enteric fever significantly went up”

Bangladesh:
“I am very much grateful to UpToDate team. To me UpToDate is like Aladdin’s magic lamp. Can’t imagine passing a day without it. It is enriching my knowledge continuously”

India:
“…Really from my heart I thank you for the great gift which impact my practice and help me to help thousands of rural community in my poor country… Thank you Thank you Thank you Thank you”
UpToDate

Core growth drivers

- Deepen penetration in international markets
- Optimize packaging/pricing
- Innovation: additional channels, virtual use cases, and partnerships
- Innovation: extend product capabilities
UpToDate innovation

Recent and ongoing product developments

- **UpToDate Advanced**
  - Curated suite of interactive pathways, calculators, lab interpretation monographs, and patient education material
  - Guides medical professionals through complex decision making at the point of care

- **Digital Health Architect**
  - Evidence-based information from UpToDate, Lexicomp, and Emmi to support care decisions
  - Integrates trusted and engaging content into existing clinical workflows that is shared with patients in a consumer-friendly design
  - Allows partners, for example digital health providers, to communicate more effectively with their patients

- **Integrated Solutions**
  - Exploring new ways to combine and extend our expert solutions for clinical effectiveness
UpToDate Advanced

*UpToDate Advanced delivers confidence and time savings at point of care*

Interactive clinical decision guidance **targets common drivers of care variability** as treatment decisions are made for each unique patient.

Concise monographs provide **quick, actionable support for interpreting abnormal lab results**.

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Source: UpToDate Pathways end-user survey, July 2019.

"Reducing variations in care is a critical part of our efforts to improve outcomes and increase patient safety. The interactive pathways in **UpToDate Advanced** have helped us streamline workflows and harmonize clinical decision-making across care teams and locations."

Heidi Twedt, MD, former CMIO, Sanford Health

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<table>
<thead>
<tr>
<th>% of Clinician Users Who Say: UpToDate Pathways ...</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Reinforces my clinical decisions</td>
<td>90%</td>
</tr>
<tr>
<td>Modifies my clinical decisions</td>
<td>84%</td>
</tr>
<tr>
<td>Decreases use of unnecessary testing, treatments, and procedures</td>
<td>83%</td>
</tr>
<tr>
<td>Saves me time</td>
<td>78%</td>
</tr>
</tbody>
</table>
Digital Health Architect

Example: Doximity integration - clinician can easily search and share patient education content during a tele-medicine consultation

Doximity is the largest community of healthcare professionals in the U.S with over 80% of U.S. doctors and 50% of all nurse practitioners (NPs) and physician assistants as verified members.

UpToDate Integration with Doximity Dialer

Professional medical network for physicians
Integrated Solutions

Exploring ways to integrate our clinical effectiveness solutions

**Clinical Effectiveness**

- **UpToDate®**
  - UpToDate Advanced®
  - Global leader for clinical decision support

- **Emmi®**
  - Multimodal and multimedia solution to engage patients in their healthcare

- **Lexicomp®**
  - Referential drug therapy information that improves decision-making

- **Medi-Span®**
  - Drug data embedded into workflow to reduce drug prescribing errors
After 30 years, UpToDate is established as the leading evidence-based knowledge resource trusted by healthcare professionals throughout the world.

Its use is associated with improved care across diverse settings.

UpToDate’s wide adoption and unique trust by providers offers several opportunities to achieve even greater impact on healthcare delivery and growth of the business.

- More than 38,800 institutions worldwide
- 650 million topics viewed per year
- 2 million clinicians in 191 countries
- 7,000 authors and peer reviewers
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Serving global medical markets

Sold to institutions and used by a wide range of healthcare professionals

<table>
<thead>
<tr>
<th>Premium Content</th>
<th>Precision Search and Tools</th>
<th>Users/Customers</th>
<th>Approximate Revenue Split</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lippincott journals and books</td>
<td></td>
<td>Physicians, Nurses, Students, Educators, Librarians</td>
<td>49%</td>
</tr>
<tr>
<td>Exclusive access</td>
<td></td>
<td>Researchers, Information Managers</td>
<td>39%</td>
</tr>
<tr>
<td>Third Party journals, books, and</td>
<td></td>
<td>Hospital</td>
<td></td>
</tr>
<tr>
<td>databases</td>
<td></td>
<td>Medical/Academic School</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Government &amp; Corporate</td>
<td>12%</td>
</tr>
</tbody>
</table>

Approximate Revenue Split

- 49%
- 39%
- 12%
Medical research powers innovation

Medical research is the “behind-the-scenes” driver of improved patient outcomes

Publication of a clinical trial

Randomized phase III trial of treatment duration for oral uracil and tegafur plus leucovorin as adjuvant chemotherapy for patients with stage IIB/III colon cancer

Change in medical practice guidelines

Practice change in duration of Oxaliplatin-Containing Adjuvant Therapy for Stage III Colon Cancer
Ovid is central to global medical research

Ovid is the world’s leading platform for searching and analyzing medical research literature

Ovid’s Key Capabilities

**Expert Content**
- 1,200+ Journals
- 100+ Databases
- 10,000+ e-books

**Precision Search**
- 250+ million searches per year
- 50+ million article downloads per year

**Advanced Tools**
- Auto alerts for pharmacovigilance
- Search collaboration
- Text and data mining
Ovid growth drivers

*Ovid aims to drive organic growth through continual innovation*

- **Global adoption of evidence-based practice (EBP):** drives demand for tools that facilitate research dissemination and analysis
- **Extend deeper into current verticals:** extend reach into workflows that involve the translation of research into practice
- **Customer-centric innovation:** Ovid’s exclusive focus on clinical space facilitates customer-focus R&D and product development
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Digital eXperience Group

Global product development organization drives faster and more efficient innovation for all four Wolters Kluwer divisions

<table>
<thead>
<tr>
<th>Health</th>
<th>Tax &amp; Accounting</th>
<th>Governance, Risk &amp; Compliance</th>
<th>Legal &amp; Regulatory</th>
</tr>
</thead>
</table>

Global Growth Markets

**Digital eXperience Group (*/dxg)**

Mission: to accelerate innovation for Wolters Kluwer customers

Global organization with around 2,000 FTEs including flexible resources

Three Centers of Excellence (CoEs):

- CoE: User/Customer Experience
- CoE: Artificial Intelligence
- CoE: Advanced Platform Services

Global Business Services
Innovation process

*User-focused, iterative and design-based software development process*

**Customer-centric, contextual design**

- Discover
- Design
- Deliver
- Deploy

**Lean product development**

- Customer-focused innovation process
- Advanced user experience (UX) and customer experience (CX) Center of Excellence
- Advanced technology and artificial intelligence (AI) Center of Excellence
- Accelerate adoption of artificial intelligence into Wolters Kluwer products
- Deliver Advanced Platform Services
- Drive SaaS maturity across Wolters Kluwer
- Enable next-gen software development models, partnerships, platforms, and ecosystems
- Testing and validating with customers through lean product practices
- Support delivery of innovation to the market
## Technology assets

*Leveraging global technology assets to maximize innovation and customer value*

### Technology Assets & Deployment Models

***/dxg Focused Asset Deployment***

<table>
<thead>
<tr>
<th>Health</th>
<th>Tax &amp; Accounting</th>
<th>GRC</th>
<th>Legal &amp; Regulatory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product Technology</td>
<td>Product Technology</td>
<td>Product Technology</td>
<td>Product Technology</td>
</tr>
</tbody>
</table>

***/dxg Global Asset Development***

- **Open Service-Oriented Capabilities:** One-ID | E-Sign | Virtual Assistant | and over 20 other tools
- ***/dxg Research Platform Capabilities:** Global Atlas | Ovid
- ***/dxg Software Platform Capabilities:** Apollo | TaskFlow | Design System | OneWeb
Driving advanced technology adoption

/*dxg deployed machine learning to empower Sentri7 to more quickly identify patients at risk of *Clostridioides difficile* (C. diff) infection

**Artificial Intelligence in Sentri7 AI+**

<table>
<thead>
<tr>
<th>Electronic Health Record System (EHR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vitals</td>
</tr>
<tr>
<td>Procedure documentation</td>
</tr>
<tr>
<td>Patient demographics</td>
</tr>
<tr>
<td>Medication orders &amp; administration</td>
</tr>
<tr>
<td>Lab results</td>
</tr>
</tbody>
</table>

| AI-powered Algorithms                |
| + evidence-based content             |

<table>
<thead>
<tr>
<th>Sentri7 AI+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient-specific guidance</td>
</tr>
</tbody>
</table>
Accelerating cloud

**Progressing the journey to the cloud: over 40% of Health digital revenues are from cloud-based solutions**

**Benefits of cloud solutions:**
- Scale and efficiency improvements
- Containers, serverless, no/low-code
- Enhanced resilience and disaster recovery
- Advanced technology: machine learning, interactive voice, text analysis

**Selected Health products:**

- **Clinical Solutions**
  - UpToDate Clinical Decision Support - ▲
  - UpToDate Advanced - ▲
  - Emmi Patient Engagement - ▲

- **Health Learning, Research & Practice**
  - Ovid
  - CoursePoint+ Nursing LMS
  - vSim Patient Simulation
  - PrepU Adaptive Learning App
  - Audio Digest
  - Lippincott Nursing Solutions
  - Lippincott Connect
Innovation with TaskFlow

*/dxg co-created the medical decision-tree workflow in UpToDate Advanced using its unique TaskFlow tool

- Cloud-based tool developed by Wolters Kluwer */dxg team; serverless, cloud-native design, and architecture
- Allows domain experts to develop “no-code” applications (without writing code), significantly decreasing time to market for innovations
  - UpToDate medical editors use TaskFlow to design decision-tree diagnosis applications
  - TaskFlow can also speed the creation of applications for data collection and virtual collaboration
- Customers benefit from improved user experience (UX), workflow and navigation
- TaskFlow is used by all Wolters Kluwer divisions. In Health, TaskFlow is used for UpToDate Advanced and Emmi Interactive Voice Integration for patient engagement

*/dxg TaskFlow Tool

Translate the knowledge into an interactive, clinical decision-making workflow tool, personalized for the patient, with documentation support - updated when the evidence changes

UpToDate Editors
Ovid innovation

Currently co-designing and developing enhancements to the Ovid Research Platform in the cloud
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Wolters Kluwer Health

*Uniquely positioned to achieve even greater impact on healthcare outcomes globally*

- 2 million clinicians in 191 countries
- Circa 60% of Health revenues from expert solutions with renewal rates over 90%
- Over 7,000 expert authors and peer reviewers
- 35 million patient interactions facilitated by Emmi solutions
- More than 38,800 institutions worldwide

Customer satisfaction: net promoter scores (NPS) over 30 for most major products

Wolters Kluwer Health employee engagement score of 88% (2020)

Product development spend 8-10% of Health revenues per year

Award-winning: Frost & Sullivan 2021 New Product Innovation Award for Sentri7 use of AI

Intensely used: 650 million topics viewed in UpToDate and 250 million searches in Ovid each year